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FLEXURAL BEHAVIOUR OF LIGHT GAUGE COLD FORMED STEEL `Z` AND `HAT` SECTIONS WITH AND WITHOUT LIPS

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Abstract
Cold-formed steel has been widely used in modern day construction industry. The property of the cold-formed steel makes it economic and feasible. In this project, an attempt has been made in order to investigate the flexural behavior of light gauge cold formed steel 'Z' and 'HAT' sections with and without lips. The flexural behaviour is evaluated both theoretically and analytically using ANSYS and the results are compared in this study. In the analytical work, four sections were loaded vertically while the lateral deflection was unrestrained to allow flexural buckling. From the results it is evident that at any particular load sections with lips will have less deflection than sections without lips (Z, HAT) and load is taken more by sections with lips than without lips (Z, HAT

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Cold-Formed Sections, Ansys, Flexural Strength, Deflection

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